



भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

No. AAI/RHQ-SR/ENGG/AGM(E-E)-III/VELLORE/2020-21/31

Date: 16.03.2020

M/s. Chennai Engineering Services,
Plot No: 30, Door No: 1-536,
Krishna Nagar, 1st Street,
Manapakkam,
Chennai - 600 125

Name of Work: Development of Vellore Airport under RCS UDAN II -
Construction of CFT Parking Bay and AAI Operational Office
Building. SH: Electrical Works.

REF: 1. AAI E-Bid No. 2020_AAI_40661_1
2. Your Quote on E-Bid (Price Bid) opened on 03.03.2020.

Dear Sirs,

1. Your e-tender for the above mentioned work is hereby accepted by the Competent Authority on behalf of the Chairman, Airports Authority of India, at the item rates quoted by you totaling to **Rs.74,40,297.50 (Rupees Seventy Four Lakhs Forty Thousand Two Hundred Ninety Seven and Paise Fifty Only)** (Plus Applicable GST) which is 10.76% Below the Estimated Cost put to Tender of Rs.83,37,444.00.
2. Asst. General Manager-Engg (E)-III, AAI, RHQ-SR, Chennai Airport, Chennai shall be the Engineer-In-Charge of the work. You are requested to attend to the Office of Asst. General Manager-Engg (E)-III, AAI, RHQ- SR, Chennai Airport, Chennai by **23.03.2020** to sign and complete the Contract Agreement. The Contract Agreement shall be executed on a non-judicial stamp paper of value Rs. 100/- (Rupees One Hundred only) and the cost of the stamp paper shall be borne by you.
3. The Earnest Money Amount of **Rs.1,66,749 /- (Rupees One Lakh Sixty Six Thousand Seven Hundred and Forty Nine Only)** received along with your Tender will be treated and converted as part of Security Deposit as per Clause 1A of AAI General Condition of Contract. Please Deposit **Rs. 5,77,281/- (Rupees Five Lakhs Seventy Seven Thousand Two Hundred and Eighty One Only)** towards balance Security Deposit within 10 days from date of issue of this award letter, failing which, the same will be deducted as per condition of Clause 1A of AAI General Condition of Contract.

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AIRPORTS AUTHORITY OF INDIA

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4. You are requested to comply with the provision of Contract Labour (Regulation and Abolition) Act 1970 and Contract Labour (Regulation and Abolition) Central Rules 1971 and Minimum Wages Act and Rules there of Central and State Governments.
5. You are also directed to contact Manager (Engg-E), AAI, immediately who will arrange to hand over the site.
6. Please note that the time allowed for carrying out the Work shall be **05 (Five) Months** which shall be reckoned from 15th day of issue of this letter.
7. Any further correspondence in connection with the contract should normally be addressed to the Asst. General Manager Engg (E)-III, AAI, Operational Office, Southern Region, Chennai Airport, Chennai 600 027.
8. Please acknowledge the receipt and return the duplicate copy of this letter enclosed herewith after signing it to the undersigned as a token of acceptance.

Thanking you,

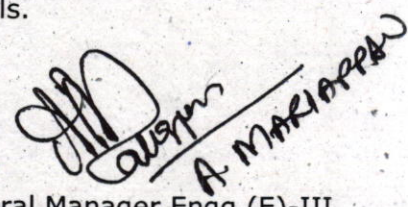
Encl: 1) Schedule of Work.

Yours faithfully,
-s/d-

Asst. General Manager Engg (E)-III
AAI, RHQ-SR, Chennai Airport.

Copy to:

1. GM (Engg -E)/AAI/SR/Chennai - For information pls.
2. JGM (Engg -E)/AAI/SR/Chennai - For information pls.
3. JGM (Engg -C)/AAI/SR/Chennai - For information pls.
4. JGM (F&A)/AAI/SR/Chennai - FC accorded by JGM (FIN)-SR vide
Noting Dtd. 11.03.2020 in e-office File No. SR-30/10/2019-ENGG-SR
5. JGM (Vig)/AAI/SR/Chennai - For information pls.
6. Manager (Engg-E)/AAI/SR/Chennai Airport
7. AAI Website/OC


Asst. General Manager Engg (E)-III
AAI, RHQ-SR, Chennai Airport.

Schedule A**SCHEDULE OF WORK**

Name of Work : Development of Vellore Airport under RCS UDAN II – Construction of CFT Parking Bay and AAI Operational Office Building. SH: Electrical Works.

BOQ Item No	Description of Item	Unit	Qty	Rate (Rs.)	Amount (Rs.)
	SH : I Supply of Light Fixtures, Cables etc.				
1.01	Supply of 2' x 2' (approx.) size recess mounting type, prewired white LED panel type luminarie (cool day light), made of extruded or pressure die casted stainless steel or aluminium, with Suitable Diffuser/ reflector to have uniform illumination with overall system wattage not exceeding 45 W and having minimum 3600 lumens, IP 20, suitable for operation on 230V +/- 10% AC supply etc., as required.	Each	40	3269.00	130760.00
1.02	Supply of LED bay light luminarie with high pressure die cast aluminum body with Diffuser made of high transmittance tempered glass material with over all system wattage not exceeding 100 Watts and having minimum 11000 lumens, IP 66, suitable for operation on 230 V +/- 10% AC Supply etc., as required.	Each	65	9999.00	649935.00
1.03	Supply of recess mounting, LED Down light luminarie with powder coated die-cast aluminum housing with over all system wattage not exceeding 12 Watts and having minimum 1200 lumens, IP 20, suitable for operation on 230 V +/- 10% AC Supply etc., as required.	Each	20	999.00	19980.00
1.04	Supply of 70/72 W LED street light luminarie (Efficacy not less than 110 Lumens/watt) with pressure die cast aluminium housing, glass cover, IP 66, suitable for operating at 230 V +/- 10%, AC supply as required.	Each	30	6459.00	193770.00
1.05	SITC of Stainless steel reverse osmosis storage cum purifier of Instant purification type having minimum Six stages of filtration & purification process (Built with RO as a prime process) with R134a refrigeration system equipped with reverse Osmosis Technology and having water flow rate of 60 LPH and storage tank capacity of 80 Ltrs suitable for operation on 230 V +/- 10%, AC supply etc., as required.	Each	2	90499.00	180998.00
1.06	Supply of following sizes of XLPE insulated PVC sheathed aluminium conductor armoured power cable of 1.1KV grade conforming to IS 7098 PART-1 with upto date amendments.				
A	3 X 4 sq. mm	Metre	750	55.99	41992.50
B	4 X 16 sq. mm	Metre	800	103.99	83192.00
C	3.5 x 25 Sq.mm	Metre	300	131.99	39597.00
D	3.5 x 35 Sq.mm	Metre	400	156.99	62796.00
E	3.5 x 50 Sq.mm	Metre	600	203.99	122394.00
F	3.5 x 185 Sq.mm	Metre	1000	616.99	616990.00
G	3.5 x 300 Sq.mm	Metre	100	951.99	95199.00

BOQ Item No	Description of Item	Unit	Qty	Rate (Rs.)	Amount (Rs.)
1.07	Supply of 1200 mm sweep high speed Ceiling fan, with double ball bearing, standard down rod and other standard accessories etc., without regulator suitable for operation on 230 V 50 Hz AC supply etc., as required.	Each	15	1829.00	27435.00
1.08	Supply of 300 mm dia single phase 900 RPM heavy duty Exhaust fan (ISI marked) with louver including all accessories etc., as required.	Each	6	2909.00	17454.00
1.09	Supply of 750 mm sweep wall mounted oscillating type Aircirculator having Air Delivery capacity of 400 M3/Min operation on 230 V 50 Hz AC supply etc., as required	Each	6	9289.00	55734.00
SH II : Wiring					
2.01	Wiring for group controlled (looped) light point/fan point/exhaust fan point/call bell point (without independent switch etc.) with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/recessed steel conduit and earthing the point with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable etc., as required. a) Group A	Point	25	399.00	9975.00
2.02	Wiring for light point/fan point/exhaust fan point/call bell point with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/recessed steel conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable etc., as required. a) Group A	Point	70	669.00	46830.00
2.03	Wiring for circuit/submain wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/recessed steel conduit as required.				
A	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	Metre	25	329.00	8225.00
B	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Metre	50	239.00	11950.00
C	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Metre	400	209.00	83600.00
D	4 X 4 sq. mm + 2 X 4 sq. mm earth wire	Metre	50	379.00	18950.00
2.04	Wiring for light/power plug with 2X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/recessed steel conduit along with 1 No. of 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing etc., as required.	Metre	300	239.00	71700.00
2.05	Wiring for light/power plug with 4X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/recessed steel conduit along with 2 Nos. of 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing etc., as required.	Metre	300	379.00	113700.00

BOQ Item No	Description of Item	Unit	Qty	Rate (Rs.)	Amount (Rs.)
2.06	Supplying and fixing following modular switch/socket on the existing modular plate & switch box including connections etc., as required.				
A	5/6 A switch	Each	30	59.00	1770.00
B	15/16 A switch	Each	15	109.00	1635.00
C	3 pin 5/6 A socket outlet	Each	30	99.00	2970.00
D	6 pin 15/16 A socket outlet	Each	15	149.00	2235.00
E	Telephone Socket	Each	15	129.00	1935.00
F	RJ 45 JACK CAT 6 1 Module	Each	15	359.00	5385.00
2.07	Supplying and fixing two module stepped type electronic fan regulator on the existing modular plate switch box including connections etc., as required.	Each	15	299.00	4485.00
2.08	Supplying and fixing of following sizes of steel conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required				
A	20 mm	Each	200	119.00	23800.00
B	25 mm	Each	100	129.00	12900.00
C	32 mm	Each	50	139.00	6950.00
2.09	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/recessed steel/PVC conduit/Tray as required.				
A	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	Metre	25	179.00	4475.00
B	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Metre	75	119.00	8925.00
C	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Metre	150	79.00	11850.00
2.10	Supplying and fixing following size/modules, GI box along with modular base & cover plate for modular switches in recess etc. as required.				
A	2 Module	Each	40	189.00	7560.00
B	3 Module	Each	15	199.00	2985.00
C	6 Module	Each	15	279.00	4185.00
2.11	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 A modular socket outlet and 5/6 A modular switch, connections etc. as required.	Each	5	329.00	1645.00

BOQ Item No	Description of Item	Unit	Qty	Rate (Rs.)	Amount (Rs.)
2.12	Supplying and fixing suitable size GI box with modular plate and cover in Front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 A modular socket outlet and 15/16 A modular switch, connection etc. as required.	Each	5	419.00	2095.00
2.13	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB Prewired distribution board, 415 V, on surface/recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required.				
A	4 way (4 + 12), Double door	Each	2	2549.00	5098.00
B	8 way (8 + 24), Double door	Each	5	3749.00	18745.00
2.14	Supplying and fixing 5 A to 32 A rating, 240 V, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc., as required				
A	Single Pole	Each	140	179.00	25060.00
2.15	Supplying and fixing single pole blanking plate in the existing MCB DB complete etc., as required.	Each	4	9.00	36.00
2.16	Supplying and fixing following rating, 4P, 415 V, MCB in the existing MCB DB complete with connections, testing and commissioning etc., as required.				
A	40A	Each	3	1399.00	4197.00
B	63A	Each	4	1499.00	5996.00
2.17	Supplying and fixing following rating, four pole, 415 V, residual current circuit breaker (RCCB), having a sensitivity current 300 mA in the existing MCB DB complete with connections, testing and commissioning etc., as required.				
A	40A	Each	3	2439.00	7317.00
B	63A	Each	4	2599.00	10396.00
2.18	Supplying and fixing DP sheet steel enclosure on surface/recess along with 20/32 A, 240 V, "C" curve DP MCB complete with connections, testing and commissioning etc., as required.	Each	2	699.00	1398.00
2.19	Supplying and fixing 20 A, 240 V, SPN Industrial type socket outlet, with 2 pole and earth, metal enclosed plug top along with 20 A "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc., as required.	Each	12	999.00	11988.00
2.20	Supplying and fixing 32 A, 415 V, TPN Industrial type socket outlet, with 3 pole and earth, plug top along with 32A "C" curve, TP, MCB, in sheet steel enclosure, on surface or in recess, with cover for the socket out let and complete with connections, testing and commissioning etc., as required.	Each	4	2599.00	10396.00

BOQ Item No	Description of Item	Unit	Qty	Rate (Rs.)	Amount (Rs.)
2.21	Installation, testing and commissioning of 2' X 2' LED panel type fittings, of all types complete with all accessories on false ceiling with chain link, including connections with 1.5 sq.mm PVC insulated, copper conductor, single core cable etc., as required.	Each	40	199.00	7960.00
2.22	Installation, testing and commissioning of low bay LED fittings complete with all accessories including connections with 2.5 sq.mm PVC insulated, copper conductor, single core cable, supports etc., as required. (Fittings to be installed in Rafter with suitable supports as approved by EIC)	Each	65	219.00	14235.00
2.23	Installation, testing and commissioning of LED downlight fittings complete with all accessories on false ceiling, including connections with 1.5 sq.mm PVC insulated, copper conductor, single core cable etc., as required.	Each	20	199.00	3980.00
2.24	Installation, testing & commissioning of 70/72W LED street light fixtures in the existing 7 Mtr street light octagonal pole including Supply & fixing of 6Amps MCB, 16 Sqmm 4 pole Connector, din bar, supply and laying of 3C x 2.5 Sqmm copper cable between fixture and MCB etc., as required.	Each	30	799.00	23970.00
2.25	Installation, testing and commissioning of ceiling fan, including wiring the downrods of standard length (upto 30 cm) with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable etc., as required.	Each	15	99.00	1485.00
2.26	Installation of exhaust fan with louver in the existing opening, including making good the damage, connections, testing, commissioning with 1.5 sqmm flexible FRLS cable etc. as required.				
A	Upto 450 mm sweep	Each	6	299.00	1794.00
2.27	Installation of wall mounted Aircirculator including connections, testing, commissioning etc. as required.				
A	Upto 750 mm sweep	Each	6	99.00	594.00
2.28	SITC of 7 Mtrs height Octagonal Hot Dip GI street light pole upto 1000 mm long single arm bracket suitable for mounting single street light luminarie complete with base plate, J foundation bolts with template, washer nuts, anchor plates, earthing stud including providing suitable RCC pole foundation as per standards/OEM specification, providing suitable dia HDPE pipe in foundation for cable entry and exit, etc., as required.	Each	30	10999.00	329970.00
	SH III : Cabling				
3.01	Supply and laying of 100 mm dia 'B' class GI pipe with all accessories complete with fitting, cutting, jointing etc., direct in ground (0.75 mtr below the ground level) including excavation and refilling the trench etc., as required.	Metre	60	899.00	53940.00

BOQ Item No	Description of Item	Unit	Qty	Rate (Rs.)	Amount (Rs.)
3.02	Supplying and laying of 63 mm OD HDPE Pipe of PE 80 PN 6 along with all accessories conforming to IS 4984 direct in ground (0.75 mtr below the ground level) including excavation and refilling the trench etc., as required.	Metre	1100	339.00	372900.00
3.03	Horizontal Direction drilling of Soil/Rock by excavation of pits on both sides of crossing, boring of Minimum 160mm diameter and laying of 160mm HDPE pipe of PN 10 and PE 100 Grade etc., complete as required. (Minimum single stretch of 10 Mtrs)	Metre	40	3499.00	139960.00
3.04	Providing, laying and fixing of following dia RCC pipe NP2 class (light duty) in ground complete with RCC collars, jointing with cement mortar 1:2 (1 cement : 2 fine sand) including trenching (75 cm deep) and refilling etc as required.				
A	2 X 300mm dia	Metre	420	1199.00	503580.00
3.05	Construction and Supply of Pre-Cast RCC Manhole Chamber of Internal Dimension 1MX1MX1M (External 1.2MX1.2MX1.2M) with RCC half split top cover of thickness 100mm with L angle reinforced at all sides of top and bottom of covers, lifting hook including finishing with Cement Coat as required.	Job	12	19999.00	239988.00
3.06	Excavation and installation of Manhole Chamber including getting out the excavated soil, back filling available earth and disposal of surplus soil etc complete as required.	Job	12	4999.00	59988.00
3.07	Laying of one number XLPE insulated and PVC sheathed power cable of 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc., as required.				
A	Upto 35 Sq.mm	Metre	150	489.00	73350.00
B	Above 35 sq. mm and upto 95 sq. mm	Metre	50	499.00	24950.00
C	Above 95 sq. mm and upto 185 sq. mm	Metre	50	499.00	24950.00
D	Above 185 sq. mm and upto 400 sq. mm	Metre	50	499.00	24950.00
3.08	Laying and fixing of one number XLPE insulated and PVC sheathed power cable of 1.1 KV grade of following size on surface as required.				
A	Upto 35 Sq.mm	Metre	700	19.00	13300.00
B	Above 35 Sqmm and Upto 95 Sq.mm	Metre	25	69.00	1725.00
C	Above 95 Sqmm and Upto 185 Sq.mm	Metre	25	79.00	1975.00
D	Above 185 Sqmm and Upto 400 Sq.mm	Metre	25	119.00	2975.00
3.09	Laying and fixing of one number XLPE insulated and PVC sheathed power cable of 1.1 kV grade of following size on cable tray as required.				
A	Upto 35 Sq.mm	Metre	700	19.00	13300.00

BOQ Item No	Description of Item	Unit	Qty	Rate (Rs.)	Amount (Rs.)
3.10	Laying of one number XLPE insulated and PVC sheathed power cable of 1.1KV grade of following size in the existing RCC/HUME/METAL pipe as required.				
A	Upto 35 Sq.mm	Metre	700	19.00	13300.00
B	Above 35 Sqmm and Upto 95 Sq.mm	Metre	500	29.00	14500.00
C	Above 95 Sqmm and Upto 185 Sq.mm	Metre	825	39.00	32175.00
D	Above 185 Sqmm and Upto 400 Sq.mm	Metre	825	69.00	56925.00
3.11	Laying of one number XLPE insulated and PVC sheathed power cable of 1.1KV grade of following size in the existing masonry open duct as required.				
A	Above 35 Sqmm and Upto 95 Sq.mm	Metre	25	19.00	475.00
B	Above 95 Sqmm and Upto 185 Sq.mm	Metre	100	29.00	2900.00
C	Above 185 Sqmm and Upto 400 Sq.mm	Metre	100	59.00	5900.00
3.12	Supply & fixing of cable junction boxes of IP 66 with 4 way terminals for loop in loop out of 3C X 4 Sq.mm cable on surface/wall including termination of cable in junction box with gland and lugs etc., complete as required (Make: HENSEL/LEGRAND/Equivalent)	Each	65	449.00	29185.00
3.13	Supplying and making end termination with brass compression gland and aluminium lugs for following size of XLPE insulated and PVC sheathed aluminium conductor cable of 1.1 KV grade as required.				
A	4 X 16 sq. mm	Set	62	199.00	12338.00
B	3.5 x 25 Sq.mm	Set	6	179.00	1074.00
C	3.5 x 35 Sq.mm	Set	8	259.00	2072.00
D	3.5 x 50 Sq.mm	Set	4	289.00	1156.00
E	3.5 x 185 Sq.mm	Set	4	599.00	2396.00
F	3.5 x 300 Sq.mm	Set	4	899.00	3596.00
3.14	Supplying and installing following size of perforated, painted with powder coating M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc., as required.				
A	150 mm width X 50 mm depth X 2.0 mm thickness	Metre	300	539.00	161700.00
B	300 mm width X 50 mm depth X 2.0 mm thickness	Metre	100	739.00	73900.00
3.15	Supplying and making cable route marker with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) of size 60 cm X 60 cm at the bottom and 50 cm X 50 cm at the top with a thickness of 10cm including inscription duly engraved as required.	Nos	12	399.00	4788.00
3.16	Supplying and fixing cable route marker with 10 cm X 10 cm X 5 mm thick G.I. plate with inscription there on, bolted/welded to 35 mm X 35 mm X 6 mm angle iron, 60 cm long and fixing the same in ground as required.	Nos	12	259.00	3108.00

BOQ Item No	Description of Item	Unit	Qty	Rate (Rs.)	Amount (Rs.)
3.17	Making of cable trenches of sizes 1 Mtr. (L) X 0.6 Mtr. (W) X 0.6 Mtr. (D) including demolishing of cement concrete/flooring on existing floor, excavation of trenches of required width upto a depth of 0.8 Mtr. below the concrete area and getting out the excavated soil/sand within a lead of 50 M providing and laying in position 1:4:8 (1 cement : 4 sand : 8 graded stone 40 mm nominal size) cement concrete at bottom [20 cm], making of brick wall of thickness 9 inch as required with good quality bricks and cement mortar 1:6 (1 cement : 6 coarse sand) and plastering the surface of walls of cable trenches with cement plaster 1:6 (1 cement : 6 fine sand) etc., as required.	Metre	10	3999.00	39990.00
3.18	Fabrication, Supply and Fixing of 6mm thick chequered plates including providing and fixing 40mmx40mmx6mm angle iron supports on cable trenches, 25mmx6mm MS flat around the chequered plate by welding, providing lifting hook etc., as required.	Kg	300	69.00	20700.00
3.19	Providing Civil Works as required as detailed below:				
A	Structural steel work in single section, fixed with or without connecting plate, i/c cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	Kg	500	59.00	29500.00
B	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering. 1:4:8 (1 Cement : 4 coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominal size)	Cum	2	5799.00	11598.00
C	Centering and shuttering including strutting, propping etc. and removal of all form for all heights	Sqm	10	199.00	1990.00
D	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement. 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	5	6499.00	32495.00
E	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete.	Kg	200	59.00	11800.00
F	Cement mortar in 1:6 (1 cement : 6 coarse sand)	Cum	3	6499.00	19497.00
G	Brick work with bricks of class designation 60 in foundation and plinth in 1:6 (1 cement : 6 coarse sand)	Cum	5	5999.00	29995.00
H	Cement plaster 12mm thick of mixture 1:6	Sqm	5	239.00	1195.00

BOQ Item No	Description of Item	Unit	Qty	Rate (Rs.)	Amount (Rs.)
	SH IV : SITC OF LT PANELS				
	SITC of MV Switch Board Outdoor Double Door Type Feeder Pillar made out of 3mm Thick CRCA Sheet Steel for Outer Shell and 2mm Thick CRCA Sheet for Inner Partition, dust tight, vermin proof, Totally enclosed, cubicle type, floor mounting, free standing, provided with rain guard on top, suitable for operation at 415 V, 3 Phase, 4 Wire, 50 Hz, AC System complete with all accessories, interconnection, connection, earthing, painting, provided with bottom base channel and locking arrangements including providing RCC Pedestal, grouting the Panel etc., as required and comprising of the following:				
4.01	Two Nos. of 250 A, 50 KA, 4P MCCBs with Microprocessor Based Releases for OC/SC/EF Protection, C.T. operated Digital Meter [EM 6400 of Conserve/Equivalent], ON/OFF/TRIP Indication and Phase Indication Lamps, Mechanical Interlocking Facility with Incomers and Bus Couplers as required.				
	One No. 250 A, 50 KA, 4P MCCB as Bus Coupler with ON/OFF Indication Lamps as required.				
	Eight Nos. of 63 A, 36 KA, 4P MCCB with Thermal Magnetic Releases for Protection as Outgoing, C.T. operated Digital VAF Meter, ON/OFF/TRIP Indication Lamps and Phase Indication Lamps as required.				
	One Set of 400 Amps Al. Bus Bars with at Par Neutral BUS BAR as required.				
	All accessories such as fuses, auxillary contactors, auxillary switches, etc., as required.				
	ALL AS ABOVE	Job	1	389999.00	389999.00
	SITC of MV Switch Board Outdoor Double Door Type Feeder Pillar made out of 3mm Thick CRCA Sheet Steel for Outer Shell and 2mm Thick CRCA Sheet for Inner Partition, dust tight, vermin proof, Totally enclosed, cubicle type, floor mounting, free standing, provided with rain guard on top, suitable for operation at 415 V, 3 Phase, 4 Wire, 50 Hz, AC System complete with all accessories, interconnection, connection, earthing, painting, provided with bottom base channel and locking arrangements including providing RCC Pedestal, grouting the Panel etc., as required and comprising of the following:				
4.02	Two Nos. of 100 A, 36 KA, 4P MCCBs with Microprocessor Based Releases for OC/SC/EF Protection, C.T. operated Digital Meter [EM 6400 of Conserve/Equivalent], ON/OFF/TRIP Indication and Phase Indication Lamps, Mechanical Interlocking Facility with Incomers and Bus Couplers as required.				
	One No. 100 A, 36 KA, 4P MCCB as Bus Coupler with ON/OFF Indication Lamps as required.				

BOQ Item No	Description of Item	Unit	Qty	Rate (Rs.)	Amount (Rs.)
	Six Nos. of 40 Amps, 36 KA, 4P MCCBs with Thermal Magnetic Releases for Protection as Outgoing and ON/OFF/TRIP Indication Lamps as required.				
	One Set of 160 Amps Al. Bus Bars with at Par Neutral BUS BAR as required.				
	All accessories such as fuses, auxillary contactors, auxillary switches, etc., as required.				
	ALL AS ABOVE	Job	1	227799.00	227799.00
4.03	SITC of MV Switch Board Outdoor Double Door Type Feeder Pillar made out of 3mm Thick CRCA Sheet Steel for Outer Shell and 2mm Thick CRCA Sheet for Inner Partition, dust tight, vermin proof, Totally enclosed, cubicle type, floor mounting, free standing, provided with rain guard on top, suitable for operation at 415 V, 3 Phase, 4 Wire, 50 Hz, AC System complete with all accessories, interconnection, connection, earthing, painting, provided with bottom base channel and locking arrangements including providing RCC Pedestal, grouting the Panel etc., as required and comprising of the following:				
	Two Nos. of 40 A, 36 KA, 4P MCCBs with Thermal Magnetic Releases for Protection, ON/OFF/TRIP Indication and Phase Indication Lamps, Mechanical Interlocking Facility with Incomers as required.				
	Two Nos. of 40 A, 36 KA, 4P MCCBs with Thermal Magnetic Releases for Protection as Outgoing and ON/OFF/TRIP Indication Lamps as required.				
	One Set of 100 Amps Al. Bus Bars with at Par Neutral BUS BAR as required.				
	All accessories such as fuses, auxillary contactors, auxillary switches, etc., as required.				
	ALL AS ABOVE	Job	1	89999.00	89999.00
4.04	Supply of nominal 2.0 mm thick (Width 1 Mtr) PVC synthetic, electric insulated mats conforming to IS 15652-2006 as required.	Sq.Mtr	6	999.00	5994.00
4.05	Fixing of nominal 2.0 mm (Width 1 Mtr) thick PVC synthetic, electric insulated mats with suitable adhensive/chemibond, chipping of floor if required, sealing of all joints etc., as required.	Sq.Mtr	6	199.00	1194.00
	SH V : Earthing and Lightning Protection				
5.01	Providing and fixing of lightning conductor finial, made of 25 mm dia 300 mm long, G.I. tube, having single prong at top, with 85 mm dia 6 mm thick G.I. base plate including holes etc., complete as required.	Each	2	299.00	598.00

BOQ Item No	Description of Item	Unit	Qty	Rate (Rs.)	Amount (Rs.)
5.02	Jointing G.I. tape (with another G I tape, base of the finial or any other metallic object) by riveting/nut bolting/sweating and soldering etc as required.	Each	2	59.00	118.00
5.03	Providing and fixing G.I. tape 25 mm X 5 mm thick on parapet or surface of wall for lightning conductor complete as required. (For horizontal run)	Metre	200	79.00	15800.00
5.04	Providing and fixing G.I. tape 25 mm X 5 mm thick on parapet or surface of wall for lightning conductor complete as required. (For vertical run)	Metre	30	139.00	4170.00
5.05	Providing and fixing testing joint, made of 25 mm X 5 mm thick G.I. strip, 125 mm long, with 4 Nos. of G.I. bolts, nuts, check nuts and spring washers etc., complete as required.	Each	2	69.00	138.00
5.06	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc., (but with charcoal/coke and salt) as required.	Set	6	3999.00	23994.00
5.07	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc. with charcoal/coke and salt as required.	Set	4	4999.00	19996.00
5.08	Providing and fixing 25 mm X 5 mm GI strip in 40 mm dia G.I. pipe from earth electrode including connection with G.I. nut, bolt, spring, washer excavation and re-filling etc. as required.	Mtr	50	399.00	19950.00
5.09	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	Mtr	50	349.00	17450.00
5.10	Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/terminating with G.I. nut, bolt, spring, washer etc. as required.(Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm)	Mtr	50	99.00	4950.00
5.11	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing along with existing surface/recessed conduit/submain wiring/cable as required.	Mtr	2200	19.00	41800.00

BOQ Item No	Description of Item	Unit	Qty	Rate (Rs.)	Amount (Rs.)
	SH VI : Fire Alarm Detection System and Supply of Fire Extinguishers				
6.01	SITC of UL Listed Intelligent Microprocessor Based Addressable Fire Alarm Panel with 1 Loop accessing at least 125 Detectors and 125 Devices having own micro controller, memory, communication module, fire device loop interface cards for intelligent initiation and indication, battery backup [12/24 Volts/As per OEM Recommendations Sealed Lead Acid Battery sufficient for 24 Hrs] with Battery Charger, Keypad Operation Facility, LCD Unit to indicate Fire/Fault Signal of individual unit, Facility to AC Switching Off, operation of Fire Hooter, Provision to connect to PCs and external printers, Programming of software with modbus and bacnet protocol etc., as required.	Job	1	173999.00	173999.00
6.02	SITC of Repeater Panel with Piezo sounder LCD alpha numeric character display with accept reset buttons, connected with field devices through Main Fire Alarm Panel including all necessary accessories, etc., as required.	Job	1	57999.00	57999.00
6.03	SITC of UL Listed Intellegent Addressable type Optical Smoke cum Heat Detector complete with all accessories like base, base box etc., to be installed under/above false ceiling - roof/concealed space etc., including interconnecting with loop cable complete as required.	Job	40	2999.00	119960.00
6.04	SITC of UL Listed Intellegent Addressable type Beam detector with module to be installed above false ceiling - roof/concealed space etc., including interconnecting with loop cable complete as required.	Job	1	45999.00	45999.00
6.05	Supply and fixing of UL Listed Addressable Hooter cum Strobe complete with address switch including base plate, box, necessary accessories etc., as required.	Job	2	5799.00	11598.00
6.06	SITC of UL Listed Addressable type Manual Call Point (Pull Station Type) complete with Input Module, Push Button, enclosed in box with provision for cable or conduit coupling, painted as required.	Job	2	5649.00	11298.00
6.07	SITC of UL Listed Intelligent Analogue addressable Control Module suitable for Single output activation complete with termination etc., as required.	Job	2	3499.00	6998.00
6.08	SITC of UL Listed Intelligent Analogue addressable Hooter Control Module suitable for Single output activation complete with termination etc., as required.	Job	2	3799.00	7598.00
6.09	SITC of UL Listed Addressable Loop/Fault Isolator with base with termination etc., as required.	Job	1	2999.00	2999.00
6.10	SITC of UL Listed Response Indicators for getting fire indications of detectors installed above false ceiling/below false ceiling area as required.	Job	20	299.00	5980.00
6.11	Supply, Installation testing & commissioning of Auto dialer with all necessary accessories including connections etc., as required.	Job	1	4999.00	4999.00

BOQ Item No	Description of Item	Unit	Qty	Rate (Rs.)	Amount (Rs.)
6.12	Supply of XLPE insulated PVC sheathed FRLS 2C x 1.5 Sq.mm copper conductor armoured control cabling for Fire detection & alarm devices as required.	Metre	600	59.00	35400.00
6.13	Laying and fixing of one number 2 C X 1.5 Sqmm Copper Conductor XLPE insulated PVC sheathed control cable on cable tray including Terminations at Devices/Panel as required	Metre	400	19.00	7600.00
6.14	Laying and fixing of one number 2 C X 1.5 Sqmm Copper Conductor PVC insulated PVC sheathed control cable on surface including Terminations at Devices/Panel as required	Metre	200	29.00	5800.00
6.15	Providing and Fixing of ISI marked CO2 type 4.5kg capacity portable Fire Extinguisher with flat base including valve, discharge hose of not less than 10mm dia and 1m long and complete in all respects including initial fill, providing & fixing wall suspension bracket confirming to IS:15683 as required.	Each	9	5249.00	47241.00
6.16	Providing and fixing ISI marked 6 kg ABC type portable fire extinguisher under IS:15683 complete with initial filling as required.	Each	3	2449.00	7347.00
6.17	Supply and fixing of foam type fire extinguishers [Portable type of 9 Litre capacity] as required.	Each	2	3799.00	7598.00
6.18	Supply and fixing of safety instruction chart (in picture & words) duly framed with glass complete as required.	Each	2	2499.00	4998.00
6.19	Providing & fixing a set of 4 Nos. 9.5 Litre capacity GI bucket painted in post office red colour and written with white paint 'Fire' and mounted on MS angle iron frame with bracket of appropriate size and capacity including filling sand complete as required.	Each	1	4799.00	4799.00
6.20	Providing & fixing of First Aid Box as approved by St. John Ambulance Brigade/Indian Red Cross conforming to IS 2217-1963 as required.	Each	1	2499.00	2499.00

BOQ Item No	Description of Item	Unit	Qty	Rate (Rs.)	Amount (Rs.)
	SH VII : SITC OF SPLIT ACs				
7.01	Supply of single phase 1.5 TR Split type Air conditioner of High wall mounting type of minimum 3 star rating consisting of non-ductable single room evaporator unit (copper coil) with cordless remote control and one number outdoor condensing unit comprising of sealed type rotary compressor suitable for operation on 230 V, 50 Hz AC supply capable of performing cooling, Air-Circulating, filtering, providing wall brackets and comprising of the following including first charge of refrigerant, facility of having auto-restart without changing of existing setting etc., as required. i) 1" or as per OEM Specification Drain PVC pipe (upto 3 meters). ii) 1/4" dia copper pipe insulated with 13 mm thick insulation or as per OEM Specification (upto 3 meters). iii) 1/2" dia copper pipe insulated with 13 mm thick insulation or as per OEM Specification (upto 3 meters). iv) 3 x 4 sq.mm copper conductor cable (upto 3 meters). v) Rigid PVC pipe / PVC Trunking of suitable size for covering all the above in (i), (ii), (iii) & (iv).	Each	5	35999.00	179995.00
7.02	Supply of single phase 1.0 TR Split type Air conditioner of High wall mounting type of minimum 3 star rating consisting of non-ductable single room evaporator unit(copper coil) with cordless remote control and one number outdoor condensing unit comprising of sealed type rotary compressor suitable for operation on 230V, 50Hz AC supply capable of performing cooling, Air-Circulating, filtering, providing wall brackets and comprising of the following including first charge of refrigerant, facility of having auto-restart without changing of existing setting etc., as required. i) 1" or as per OEM Specification Drain PVC pipe (upto 3 meters). ii) 1/4" dia copper pipe insulated with 13 mm thick insulation or as per OEM Specification (upto 3 meters). iii) 1/2" dia copper pipe insulated with 13 mm thick insulation or as per OEM Specification (upto 3 meters). iv) 3 x 4 sq.mm copper conductor cable (upto 3 meters). v) Rigid PVC pipe / PVC Trunking of suitable size for covering all the above in (i), (ii), (iii) & (iv).	Each	7	29999.00	209993.00
7.03	Installation, testing and commissioning of single phase 1.5/1.0 TR split airconditioner of high wall mounting type with minimum 3 star rating including fixing the condenser, evaporator unit, Stabilizer, Outdoor stand, making all inter connections between evaporator unit and condensor unit up to a length of 3 mtrs etc., gas charging, pressure testing complete as required.	Each	12	1499.00	17988.00
7.04	Supply of 4 KVA Voltage stabilizer wall mounting type suitable for 1.5 TR split A/C units with input volt range 170 V to 270 V etc., as required.	Each	12	1499.00	17988.00
7.05	Supply and fixing of drain pipe suitable for 1/1.5 ton AC (extra length beyond 3 Mtrs) etc complete as required.	Meter	120	119.00	14280.00

BOQ Item No	Description of Item	Unit	Qty	Rate (Rs.)	Amount (Rs.)
7.06	Supply and fixing suction copper line and discharge copper line with suitable supports including insulation and protective rigid PVC pipe/PVC trunking of suitable size for interconnections between evaporator unit and condensing unit (extra length beyond 3 Mtrs) for 1.5/1.0 ton AC complete as required.	Meter	120	649.00	77880.00
7.07	Supply and fixing of following copper conductor cables with suitable supports for interconnections between evaporator unit and condensing unit (extra length beyond 3 Mtrs) for 1.5/1.0 Ton AC complete as required.				
A	3 x 4 sq.mm copper conductor cable	Meter	120	149.00	17880.00
	Total Amount in Rs.				7,440,297.50
GST EXTRA AS APPLICABLE					


A. Manoj

Asst.General Manager (Engg-Elect)-III
AAI,RHQ-SR,Chennai Airport.